PERFORMANCE AUDIT REPORT
ON THE PROJECT OF REHABILITATION OF
27 HGMU-30 DE LOCOMOTIVES
BY PAKISTAN RAILWAYS

AUDIT YEAR 2016-17

AUDITOR GENERAL OF PAKISTAN

PREFACE

The Auditor General of Pakistan conducts audit in terms of Articles 169 and 170 of the Constitution of the Islamic Republic of Pakistan 1973, read with sections 8 and 12 of the Auditor General's (Functions, Powers and Terms and Conditions of Service) Ordinance 2001. The Performance Audit of the project of Rehabilitation of 27 HGMU-30 DE Locomotives was carried out accordingly.

The Directorate General Audit Railways conducted Performance Audit of the project of Rehabilitation of 27 HGMU-30 DE Locomotives during audit year 2016-17 for the period 2011-12 to 2015-16 with a view to report significant findings to stakeholders. Audit examined the economy, efficiency and effectiveness aspects of the project. In addition, Audit also assessed, whether the management complied with applicable laws, rules and regulations in managing the project affairs. The Audit Report indicates specific actions that, if taken, will help the management realise the objectives of the project of Rehabilitation of 27 HGMU-30 DE Locomotives. All observations included in this report have been finalised in the light of discussion with the management. However, DAC meeting was not convened by the PAO despite reminders.

The Performance Audit Report is submitted to the President of Pakistan in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan 1973, for causing it to be laid before both houses of Majlis-e-Shoora (Parliament).

Islamabad **(Javaid Jehangir)**
Dated: 06.03.2018 **Auditor General of Pakistan**

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Abbreviations and Acronyms

AGM	Additional General Manager
ACOS	Assistant Controller of Store
BPS	Basic Pay Scale
3Es	Economy, Efficiency & Effectiveness
CCP	Chief Controller of Purchase
CDWP	Central Development Working Party
CDR	Call Deposit Receipt
CD & ST	Custom Duty & Sales Tax
C&F/CFR	Cost and Freight
CME	Chief Mechanical Engineer
COPS	Chief Operating Superintendent
DAC	Departmental Accounts Committee
DCOS	District Controller of Stores
DE	Diesel Electric
DELs	Diesel Electric Locomotives
DS	Divisional Superintendent
ECNEC	Executive Committee of National Economic Council
EMDL	Electro Motive Diesel Limited
FA&CAO	Financial Advisor and Chief Accounts Officer
FEC	Foreign Exchange Component
FOR	Free on Rail
GM	General Manager
HBL	Habib Bank Limited
HP	Horse Power
HGMU	Henschell General Motors Universal
INTOSAI	International Organization of Supreme Audit Institutions
IPS	Industrial Power Supply
KC	Karachi Cantt
KM	Kilometer
KMPH	Kilometer per Hour
LC	Letter of Credit
LD	Liquidated Damages
LOCO	Locomotive

MCB	Muslim Commercial Bank
MOR	Ministry of Railways
MTKM	Million-ton kilometer
OEM	Original equipment manufacturer
PAO	Principal Accounting Officer
PC-I	Planning Commission Proforma-I
PD	Project Director
PMES	Project Monitoring & Evaluation System
PLF	Pakistan Locomotive Factory
PR	Pakistan Railways
PSDP	Public Sector Development Program
TLA	Temporary Labour Application
US	United States
UTEX	Unit Exchange
WM/D	Works Manager/Diesel

EXECUTIVE SUMMARY

The Directorate General Audit Railways conducted Performance Audit of the project titled Rehabilitation of 27 HGMU-30 DE Locomotives in September-November 2016. The main objective of the audit was to review the performance of the project against 3 Es (Economy, Efficiency and Effectiveness). The audit was conducted in accordance with the INTOSAI Auditing Standards.

The project envisaged Rehabilitation of 27 HGMU-30 Diesel Electric Locomotives, purchased by Pakistan Railways during 1986. These locomotives, after completing useful life of 20 years in 2006, were proposed for rehabilitation in order to be retained in freight service for another 12-15 years. The locomotives were supposed to generate an additional 1,150 MTKM freight traffic per annum. The original PC-I was approved by ECNEC on 26.05.2011 at the cost of Rs 5,108 million with completion period up to 30.06.2014. However, as a result of international competitive bidding during July 2011, the cost of project was increased by 23% above the approved cost of the original PC-I which necessitated revision of the PC-I. Accordingly, revised PC-I of the project was approved by ECNEC on 13.09.2013 at the cost of Rs 6,558.524 million with completion period up to 30.06.2015. At the time of performance audit, the project was in progress and out of 27 locomotives, 15 locomotives had been put into operation. Cumulative expenditure up to 30th June, 2016 was Rs 6,303.810 million. The physical progress of the project was 56.56%, while financial progress was 96.12%.

Key Audit Findings

i. Uncompetitive/uneconomical procurement in violation of PPRA Rules – Rs 4,336.166 million.[1]

ii. Loss of potential earnings due to delay in rehabilitation of locomotives – Rs 863.772 million.[2]

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[1] Para 4.3.1
[2] Para 4.7.4

iii. Loss due to irregular payment made in violation of contract – Rs 93.046 million.[3]

iv. Non-achievement of value for money spent on up-gradation of engine block shop – Rs 56.407 million.[4]

v. Blockage of capital due to un-necessary/defective procurement of material – Rs 45.424 million.[5]

vi. Loss of potential revenue due to detention of locomotives for premature wheel machining – Rs 27.61 million.[6]

vii. Loss of potential earning due to premature overhauling of a diesel engine – Rs 20.510 million.[7]

viii. Infructuous expenditure on repair of a locomotive – Rs 8.582 million.[8]

ix. Non-production of requisite record.[9]

Recommendations

i. PPRA Rules may be observed in true spirit to ensure fair and transparent competition.

ii. Penalty for delay in turning out of locomotives may be imposed and loss of potential earning be recovered from the contractor.

iii. Irregular payment be recovered from the supplier.

iv. The issue may be investigated at an appropriate level for non-upgradation of engine block shops despite considerable investment, besides recovery of amount paid for defective machinery/tools to supplier.

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[3] Para 4.3.8
[4] Para 4.3.10
[5] Paras 4.3.12, 4.3.13 & 4.3.14
[6] Para 4.5.1
[7] Para 4.3.9
[8] Para 4.4.7
[9] Para 4.2.4

v. Responsibility for excess/defective supply of material be fixed and amount involved may be recovered from the supplier.

vi. Responsibility for the loss of money spent on repair of locomotives, which were not put into operation, may be fixed.

1. INTRODUCTION

As per original PC-I, the project envisaged rehabilitation of 27 HGMU-30 diesel electric (DE) locomotives purchased by Pakistan Railways during 1986. These locomotives after completing useful life of 20 years in 2006 were to be rehabilitated to provide freight service for further 12-15 years and to generate additional 1,150 MTKM (million-ton kilometers) of freight traffic per annum. After rehabilitation, the availability and reliability of PR’s fleet was to be improved and thus resulting in increased productivity. The original PC-I was approved by ECNEC on 26.05.2011 at the cost of Rs 5,108.000 million (including FEC Rs 3,390.848 million).

The cost of the project was worked out to US$ 38.963 million. Subsequent to approval of the project by ECNEC, as a result of international competitive bidding during July 2011, actual cost of project became US$ 45.453 million which was 16.8% above the approved cost of the original PC-I. Moreover, the total revised cost of Rs 6,558.524 million was 28 % more than the original approved cost of Rs 5,108.000 million; therefore, the increase necessitated revision of PC-I. Accordingly, revised PC-I of the project was approved by ECNEC on 13.09.2013 at the cost of Rs 6,558.524 million (including FEC Rs 4,390.366 million).

Scope of work

The scope of work included complete replacement of twenty seven (27) HGMU-30 locomotives with re-manufactured diesel engine units with mounting pads and other essential parts. Out of total 27 DE locomotives, 15 (fifteen) DE locomotives were to be re-manufactured abroad on UTEX (unit exchange) basis by replacing new OEM (original equipment manufacturers) and remaining 12 (twelve) DE locomotives would be re-manufactured locally by replacing new OEM parts. Besides rehabilitation of 27 locomotives, scope of work also included upgradation of existing facilities of re-building/ manufacturing of engine block, crankcase and oil pan at engine block shops, Mughalpura, Lahore. Procurement of plant and machinery, tools, material handling equipment, and other allied facilities besides civil and electrical works for installation of plant and machinery were also included in the proposed scope of work.

Date of approval

The original PC-I of the project at the cost of Rs 5,108 million (including FEC Rs 3,390.848 million) was approved by the Executive Committee of National Economic Council (ECNEC) on 26.05.2011, while the revised PC-I was approved by ECNEC on 13.09.2013 at the cost of Rs 6,558.524 million (including FEC of Rs 4,390.366 million).

Completion period

As per original PC-I, the project was scheduled to be completed within 36 months from 1st July, 2011 (target date 30.06.2014). However, the completion period was enhanced to 48 months (target date 30.06.2015) in the revised PC-I.

Date of commencement

The Administrative approval of the project was given by the competent authority on 11.06.2011. The project was in implementation stage at the time of audit. Out of 27 locomotives, 15 locomotives had been put into operation up to June 2016. The cumulative expenditure up to 30th June, 2016 was Rs 6,303.810 million. The physical progress was 56.56%, while financial progress was 96.12%.

2. AUDIT OBJECTIVES

The major objectives of the audit were:

i. To review project's performance against intended objectives to ascertain whether the objectives laid down in the PC-I have been fully achieved with due regard to 3E's (Economy, Efficiency and Effectiveness).

ii. To verify the efficiency of internal controls and ascertain control failures.

iii. To review compliance with applicable rules, regulations and procedures.

3. AUDIT SCOPE AND METHODOLOGY

3.1 Audit Scope

The Performance Audit of the project of Rehabilitation of 27 HGMU-30 DE Locomotives was conducted during Audit Year 2016-17 for the period covering 2011-12 to 2015-16. Different locations were visited for the purpose of audit, i.e. PD/Rehabilitation/ Workshops, CME/Loco Lahore, DCOS/Shipping, Diesel Shed Karachi Cantt: and Directorate of Procurement, Islamabad.

3.2 Audit Methodology

Review of files/documents for comparative analysis of rehabilitated locomotives with that of new locomotives was conducted. Cases regarding procurement process and other working operations were examined in order to assess the achievements/shortcomings. Local and foreign agreements were also scrutinised to check the fulfillment of their contents.

4. AUDIT FINDINGS AND RECOMMENDATIONS

4.1 Organization and Management

The Project Management Guidelines developed by the Planning Commission of Pakistan provide exhaustive guidelines for efficient management of the project funded by PSDP. For timely completion of the project and attainment of envisaged goals and objectives of PC-I, the Guidelines necessitate that there should be a suitable, qualified and dedicated Project Director who should be responsible for the effective and efficient management and should not be transferred during currency of the project.

While conducting the performance audit of the Project, audit found out that the management did not adhere to these Guidelines of the Planning Commission. The execution of the Project was managed by different Project Directors. The significant observations are discussed in the following Paras:

4.1.1 Frequent transfer of Project Director

According to Clause 2.2 of the Project Management Policy, the Project Director, who is the focal point in project implementation, is responsible for project execution according to its objectives, work scope and implementation schedule. Suitable and qualified Project Director should be appointed in case of each project that should not be transferred during currency of the project.

During Performance Audit in September-November 2016, it was observed that the Ministry of Railways was not complying with the project management policy. Three Project Directors, as detailed below, were posted in the project from 2011 to 2016. Additional charge of the Project Director (serial number-4 below) was assigned to an officer from August 2015 who was serving as DS (Workshops), CCP and CME/Loco.

Table-1

S.No	**Project Director**	**Tenure**	
		From	To
1	M Rafique Khan	17.2.2010	19.8.2013
2	Shahid Aziz	21.8.2013	01.6.2015
3	Adnan Shafai	01.6.2015	13-8-2015
4	Shahid Aziz (Additional Charge)	13.8.2015	Till date of audit

In the absence of one permanent PD till the completion of the project, responsibility for timely completion and reporting true facts to higher authorities could not be fixed.

The issue was taken up with project management in September 2016. The management replied on 10.04.2017 that frequent transfers of Project Director were made over the short spell of time by the Ministry of Railways. The reply was not satisfactory because Project Director was responsible to furnish the reply by contacting the concerned quarters.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for frequent posting/transfer of project directors be explained. Responsibility for non-adherence to the project management policy be fixed. One permanent Project Director be appointed in each project who should supervise all activities till the completion of the project as envisaged in the Guidelines of Planning Commission.

4.1.2 Irregular expenditure on appointment of TLA staff – Rs 4.971 million per annum

As per Finance Division (Regulation Wing) letter No. F.4(9)R-3/2008-499 dated 12.08.2008, the staff for development projects funded from PSDP was required to be recruited from open market on contract basis. Moreover, as per General Manager/Operations letter No. GM.Misc.07/2014 dated 07.07.2014, essential staff against work charged posts of the projects was required to be engaged on contract basis by following the laid down procedure for contract appointments.

During performance audit, it was observed that as per revised PC-I there was a provision of 76 posts of skilled workers (BPS-06), 21 semi-skilled workers (BPS-04) and 40 posts of muawans (BPS-01). After adjustment of existing regular employees, the remaining posts were required to be filled in on contract basis. In disregard to the above, it was noticed that the staff was irregularly engaged on TLA (Temporary Labour Application) basis instead of making contract appointments. This resulted in irregular expenditure of Rs 4.971 million.

The issue was taken up with project management in December 2016. The management replied on 10.04.2017 that after adjustment of existing regular employees and transfer from other units, the remaining essential posts were filled on TLA basis. Normally retired railway skilled trained staff having good health and physique was engaged on TLA basis because such staff were not regularly available in local market due to special job. The reply was not tenable because the staff was required to be appointed on contract instead of TLA basis.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for irregular appointments of staff be explained. Responsibility be fixed and disciplinary action be taken against those found at fault. Remedial measures be adopted to avoid such incidents in future.

4.1.3 Mis-utilisation of Project staff – Rs 6.022 million per annum

As per standing orders the staff should be utilised for the purpose it was employed for. There should be proper job description/duty list of each and every official. Attendance should be marked on daily basis.

During performance audit, it was observed that staff of different categories was found mis-utilised by the project management. Two employees of BPS-1 appointed on TLA (detail in Annexure-1), five employees of skilled category (detail in Annexure-2), one Junior Mechanical Engineer (BPS-17), one Accounts Officer (B-18) and one Accountant/Senior Auditor (B-16) were not performing their duties for which they were appointed. This resulted in irregular expenditure of Rs 6.022 million per annum (detail in Annexure-3).

The issue was taken up with project management in December 2016. The management replied on 10.04.2017 that the services of two employees of BPS-1 were being utilised as Naib Qasids to deliver dak. Out of five skilled employees, three employees were deployed as drivers/helper and remaining two employees working in office of Chief Inspector Production, Rehabilitation Project. Junior Mechanical Engineer was deployed as ACOS temporarily by the Headquarters office; just to facilitate the project activities smoothly. Account Officer/Project was responsible for handling of financial issues of various projects thus the payments of Account Staff was being booked against those projects. The reply was not satisfactory because the employees were not performing the duty for which they were employed.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for improper utilisation of posts/staff be fixed and disciplinary action be taken against those found at fault. The technical staff deployed outside the workshops on Loco-70 may be returned back without further loss of time. Job description of each and every employee be prepared.

4.2 Financial Management

According to Project Management Guidelines, full financial and administrative authority must be delegated to the Project Director. Guidelines for financial management prescribe that economy (getting full value of money) and regularity (spending money for the purposes and in the manner prescribed by Law & Rules) be observed.

The significant observations are discussed in the following Paras:

4.2.1 Blockage of funds – Rs 302.477 million

Para 436 of State Railway General Code provides that it shall also be the duty of the administration to see that the allotments made to them are fully expended, in so far as is consistent with economy. They shall be responsible for ensuring that money which is not likely to be needed during the year is promptly surrendered so as to allow of its appropriation for other purposes. However, no explanation will be required for saving up to 5%, and excesses up to Rs. 5,000 in case of non-development expenditure and up to Rs. 10,000 in case of development expenditure.

During performance audit, it was noticed that funds released to the tune of Rs 276.374 million during 2011-12 and 2012-13 were neither utilized nor surrendered. On the other hand, a sum of Rs 26.103 million was utilised in excess of the cash releases during 2014-15 and 2015-16. Thus, due to negligence of the project management, funds amounting to Rs 302.477 million (Annexure-4) were either blocked or used in excess of the cash releases which indicated poor financial management:

The issue was taken up with project management in September 2016. The management replied on 10.04.2017 that the variation for expenditures (less or excess) was 15% as compared to released amount, but no authority was provided to Audit for verification. The reply was not satisfactory because the permissible limit for saving was 5% and in case of excesses it was Rs 10,000.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for non-surrendering of funds as well as utilization of funds in excess of cash releases be fixed and necessary action be taken against the person(s) held responsible.

4.2.2 Non-supply of record/information

As per Section 14 (2) of the Auditor General's (Functions, Powers, and Terms and Conditions of Service) Ordinance 2001, any officer in charge of any office or department shall afford all facilities and provide record for audit inspection and comply with requests for information in as complete a form as possible and with all reasonable expedition. Furthermore, Section 14 (3) stipulates that any person or authority hindering the audit functions of the Auditor-General regarding inspection of accounts shall be subjected to disciplinary action under relevant Efficiency and Discipline Rules, applicable to such person.

During performance audit, following record/information was not provided for audit examination despite several personal contacts as well as written reminders: -

i. Works/Liability Registers for the year 2011-12 to 2015-16.

ii. Duty list/job description of staff working in PD office including those booked on Loco-70.

iii. Item wise expenditure in line with the approved PC-I.

iv. Detail of warranty claims showing amount against each item.

v. Detail with cost of released material returned to General Store by WM/Diesel Karachi Cantt.

The issue was pointed out to project management in September 2016. The management replied on 10.04.2017 that all relevant credentials/records in line with supplied list of the Audit Officer were made available to Audit. Anyhow, if any record / information needed to re-check by an Audit Officer, then the same may be examined at any time, even with or without any prior notice thereto. The reply was not tenable because despite repeated requests by Audit team during the course of inspection, above record was not made available.

Audit recommends that matter be investigated at an appropriate level to fix responsibility for non-supply of record. Disciplinary action be initiated under Efficiency & Discipline Rules against the persons held responsible.

4.3 Procurement and Contract Management

Procurement and contract management are essential components of infrastructure sector projects. Value for money should be the main consideration for the procurement and contract management. The management should have proper procurement policy and procurements should be made after proper need assessment. The Guidelines for Project Management state that all the contracts be processed and awarded by following procedures contained in the Public Procurement Rules.

During the performance audit, it was observed that the procurement process in the Project was neither economical nor efficient. Instances of mis-procurement, violation of contractual obligations etc. were noticed. The procurement planning was made without proper need assessment. The significant observations are discussed in the following Paras:

4.3.1 Uncompetitive/uneconomical procurement – Rs 4,336.166 million (US$ 45,452,609)

According to Clause 10 of PPRA Rules, specifications shall allow the widest possible competition and shall not favour any single contractor or supplier nor put others at a disadvantage. Specifications shall be generic and shall not include references to brand names, model numbers, catalogue numbers or similar classifications.

During performance audit, it was observed that an international tender for rehabilitation of 27 HGMU-30 locomotives was opened on 09.12.2011. There was provision of 27 brand new microprocessors including all accessories. The specification of that item was exactly based on “EM2000 microprocessor control system” which was a proprietary product of M/s Electro-Motive Diesel Limited (EMDL) and the same was offered to PR by M/s EMDL in August 2010. Thus, widest possible competition was restricted and only one offer was received from M/s EMDL. The firm obtained 76% marks while minimum 80% marks were necessary for qualification, besides, the firm also failed to comply with 08 disqualification clauses (Annexure-5). Resultantly, the tender was filed and refloated afresh after elimination of certain disqualification clauses from evaluation criteria of previous technical specifications.

Re-advertised tender was opened on 23.04.2012. Again, single offer of M/s EMDL was received. The firm got 92% marks and qualified for opening of financial offer. The financial offer was opened on 23.05.2012. Despite dissent about reasonability of rates by two members of the tender committee (i.e. Member Finance and AGM/Infrastructure), the Secretary/Chairman Ministry of Railways awarded the tender in favour of M/s EMDL and an agreement was executed at a cost of US$ 45,452,609 on 19.07.2012. It indicated that undue favour was extended to M/s EMDL first by framing the specification of control system on his proprietary product, secondly by eliminating certain disqualification clauses from the former evaluation criteria. This resulted due to imprudent decision made by Railway management.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the para did not pertain to the PD office, therefore, the issue may be referred to the concerned quarters for an appropriate reply. The reply was not satisfactory because Project Director being a focal person was responsible to furnish the reply in consultation with the concerned quarters.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for non-compliance of PPRA Rules and extending undue favour to the specific bidder be fixed. Necessary action be taken against the person(s) held responsible.

4.3.2 Expected loss of millions of rupees due to change in mode of warranty replacements

Clause 14.3 of contract agreement dated 07.12.2012 executed by Director Procurement, Ministry of Railways for procurement of 25 DE Locomotives provides that, if any, goods or part thereof fails to meet the warranties due to seller's reasons after detection supported by an inspection report, the seller shall repair, amend or replace same, as appropriate, FOR Karachi basis.

In disregard to the aforementioned clause, during performance audit, it was observed that in clause 14.3 of contract agreement dated 19.07.2012 for rehabilitation of 27 HGMU-30 DE Locomotives, provision of warranty replacement was made on CFR Karachi basis (instead of FOR basis), which was against the Railway interest. Due to injudicious change in mode of warranty replacements, Pakistan Railway was put to suffer loss upto 35% of the cost of material so replaced by way of CD/ST, handling charges etc.

The issue was taken up with the project management in January 2017. It was replied on 10.04.2017 that the para did not pertain to the PD office, therefore, the issue may be referred to the concerned quarters for an appropriate reply. The reply was not satisfactory because Project Director was responsible to furnish the reply in consultation with the concerned quarters.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for injudicious change in mode of warranty replacement be explained. Responsibility be fixed and action be taken accordingly. Remedial measures be adopted to avoid recurrence.

4.3.3 Irregular/unjustified change in specification after opening of bids

Rule-31(1) of PPRA stipulates that no bidder shall be allowed to alter or modify his bid after the bids have been opened. However, the procuring agency may seek and accept clarifications to the bid that do not change the substance of the bid.

In violation to above rule, during performance audit, it was observed that as per technical specifications and evaluation criteria, the bidders were required to confirm that the horse power for traction would be within the range of 3000 to 3300 and submit a certificate in this regard. The EMDL while submitting their technical proposal submitted the required technical compliance certificate. Later, Project Director pointed out that the maximum traction horse power of locomotive number 8205 was found to be 2890 HP. The issue was discussed with the representatives of the firm through correspondence and in the meetings, Railway management emphasized to fulfill the requirement of technical specifications. Later M/s EMDL vide their letter dated 22.10.2014 submitted a revised technical compliance certificate, wherein the firm mentioned that brake horse power would be in the range of 3000-3300 HP instead of traction horse power which was requirement stated by PR. This resulted in modification of bid in violation of PPRA Rules.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that there was confusion about range of traction horse power. The range of rehabilitated HGMU-30 DE locomotives had been modified by the Procurement Directorate, Islamabad with approval of the Secretary/Chairperson Railways. The reply was not tenable because after opening of a bid, its modification was strictly prohibited under PPRA rules. It led to procurement of substandard locomotive by overriding the provisions of PPRA Rules.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for overriding of provisions of PPRA Rules be fixed and action be taken against the person(s) held responsible. Remedial measures be adopted to avoid recurrence.

4.3.4 Loss of millions of rupees due to non-settlement of warranty claims

As per clause 14.3 of contract agreement dated 19.07.2012, if any goods or part thereof fails to meet the warranty due to seller’s reasons after the detection supported by an inspection report, the seller shall repair or replace same CFR Karachi basis.

During performance audit, it was observed that about 170 warranty claims worth millions of dollars had been lodged against M/s Electro-Motive Diesel Limited, United Kingdom, but none of the warranty claim had been settled so far. This resulted in loss of potential revenue caused due to delay in turning out of locomotives.

The issue was taken up with project management in September 2016. The management replied on 10.04.2017 that matter for the settlement of warranty claims was under consideration with the supplier and would be resolved shortly. The reply was not tenable because the warranty claims were required to be settled immediately to avoid hindrance during work. Due to undue delay in settlement of warranty claims, the out turn of locomotives was delayed which caused to loss of revenue on the part of supplier.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that the issue be taken up at an appropriate level for early settlement of warranty claims. A complete list of warranty claims showing date and amount of each claim be provided to Audit. Loss of expected revenue due to delay in outturn of locomotives as a result of non-settlement of warranty claims be worked out and recovered from the supplier.

4.3.5 Non-blacklisting of suppliers indulged in corrupt or fraudulent practices

Rule-19 of PPRA provides that the procuring agencies shall specify a mechanism and manner to permanently or temporary bar, from participating in their respective procurement proceedings, suppliers and contractors who either consistently fail to provide satisfactory performances or are found to be indulging in corrupt or fraudulent practices. The definition of "corrupt or fraudulent practices" includes collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the procuring agencies of the benefits of free and open competition.

During performance audit, scrutiny of tender documents processed by the Project Director in connection with procurements of different materials for rehabilitation of 27 HGMU-30 DE locomotives revealed that to limit free and fair competition some bidders had enlisted more than one firms with different names. Instances of the nature were given in Annexure-6, wherein the firms having different postal address submitted CDR from a bank having consecutive numbers of same date. Moreover, the handwriting on both the letter pads representing different firms was of one person. The project authorities kept their eyes closed over that critical aspect, which was against public interest. Audit was of the view that due to pooling of bidders the rates accepted by the project authorities for procurement of project material were not competitive.

The issue was pointed out to project management in December 2016. The management replied on 10.04.2017 that Audit had correctly pointed out that the firms with different names had submitted CDRs from a single bank having consecutive serial numbers and same date. But as per PPRA Rules, there was no binding obligation for disqualification of firms having a bank account in a single bank branch. Similarly, there was no hard and fast rule for examination of hand writing and other activities for ascertaining the suitability/unsuitability of the offers. The reply was not tenable because there was a provision in PPRA Rules to debar such suppliers/contractors to participate in bidding process who were found involved in collusive practices to establish bid price non-competitive.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility be fixed for making purchases knowingly from the bidders involved in corrupt and fraudulent practices and disciplinary action be taken against those held responsible. Remedial measure be adopted to avoid recurrence.

4.3.6 Violation of contract agreement resulting in supply of assemblies against the specification

According to item D of Annexure-A-I of agreement, 27 Main Alternators AR 10-D 18/CA5 shall be remanufactured and up graded as

AR 10-CA6 abroad on UTEX basis with used cores shipped from Pakistan.

During performance audit it was observed that 05 Main Alternators were received in Pakistan after UTEX repair without up gradation to CA6. This resulted in violation of the agreement.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the subject matter was proactively taken up with the supplier. Resultantly, the corresponded materials titled as CA-6 duly upgraded kit as required under agreement had been received at site from the concerned firm. The reply was not tenable because the Main Alternators were required to be upgraded from abroad not in Pakistan. Moreover, no evidence regarding, up gradation of Main Alternators with the material shipped by the supplier was provided to Audit for verification.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that action taken against the supplier for deviation in scope of works to be done abroad be intimated. Extra payment, if any, made to the supplier be recovered.

4.3.7 Non/less supply of material – Rs 8.322 million (US$ 81,586)

As per contract agreement dated 19.07.2012, the following material/spares were required to be supplied by the EMDL for rehabilitation of 27 HGMU-30 Locomotives.

During performance audit, it was observed that the following material/spares were not supplied by the contractor.

Table-2 **US$**

S. No.	Description	Part No.	Quantity required to be supplied as per contract agreement	Quantity actually supplied	Less supplied	Value of material less/not supplied
1	D78 17T TR Motor-UTEX SM	40232280	162	160	2 @ US$ 34,500 each	69,000.00

2	Brake cylinder BGS 8”	1/43356/ 11502	324	312	12 @ US$ 1047.78 each	12,573.36
					Total:	**81,586.36**

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that 162 Nos. (D78 17T TR Motor-UTEX SM) had been received and that Pakistan Railways had sent 312 Nos. brake cylinders for repair on UTEX basis. The same had been received back after repair. No brake cylinder was outstanding against the firm. The reply was not satisfactory because during verification conducted on 13.09.2017, it was noticed that two D78 17T TR Motor-UTEX returned to supplier for replacement under warranty, were not received back. Regarding item 2 above, as per agreement, the supplier had to provide 324 brake cylinders, whereas only 312 were supplied.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for non/less supply of material be fixed. The amount involved may either be recovered or the shortage recouped from the contractor. Responsibility be fixed against officials for such negligence. Measures be adopted to avoid recurrence.

4.3.8 Loss due to irregular payment made in violation of contract – Rs 93.046 million (US$ 912,215)

(a) As per item i(b) of amendment No. 2 dated 21st March 2014 to contract agreement, the EMDL was required to supply to Pakistan Railways 39 new Armatures in lieu of remanufactured armatures fitted in already shipped traction motors free of cost.

In disregard to above, it was observed that instead of supplying free of cost, the supplier received payment of US$ 760,500 for 39 Armatures as detailed below. The project management had completely failed to detect this undue payment. This is a typical example of contract mismanagement and lack of public interest on the part of the project authorities. This resulted in incorrect payment.

Table-3

Invoice No.	Description	Part No.	Quantity	Value US$
93051953	Armature ASM	40120100	16	312,000
93051954	Armature ASM	40120100	16	312,000
93051955	Armature ASM	40120100	07	136,500
			Total US$	**760,500**

(b) In another case, a quantity of 192 Nos. Injector Assembly-UTEX MUI (Part No. 40079002, valuing US$ 345.54 each), supplied by the contractor was found unsuitable which was required to be replaced free of cost. Instead of supplying the above item free of cost the contractor received payment of US$ 151,715 for 192 Nos. Injector Assembly (ECO TIP) MUI (Part No. 40083533, valuing US$ 790.18 each), shipped in the replacement. This also resulted in wrong/incorrect payment. Thus, PR sustained a loss of Rs 93.046 due to incorrect payment.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the matter was taken up with the firm vigorously as and when invoices of both items were received. M/s EMDL had confirmed vide letter dated 23.09.2015 that they would refund the amount and credit would be given against future parts to be supplied to Pakistan Railways as required by the above mentioned contract. Actually the amount 760,500 US $ was paid by the bank for 39 Nos. new armatures supplied by the firm and the amount 345.54 x 192 = 66,343.68 US$ had been paid against 192 Nos. injectors supplied by the firm on UTEX basis. This total amount 760500 + 66343.68 = 826,843.68 US $ had been adjusted/ compensated against the material supplied by the firm on Free of Cost Basis. From September 2015 to up-till-now the firm had shipped free of cost material of an amount US$ 935,951. In the light of the above clarification, no loss had been sustained by the Railways administration. The reply was not tenable because refund claim of amount involved was not lodged with the contractor, nor the issue was referred to the competent authority (Secretary/Chairperson, MOR) for decision. Moreover, no free of cost supply was received in lieu of the components in question.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for making wrong/incorrect payment be fixed. Disciplinary action be taken against the persons found at fault under intimation to Audit. The amount involved be recovered from the supplier and remedial measures be adopted to avoid recurrence.

4.3.9 Loss due to premature overhauling of one DE Locomotive – Rs 20.510 million

As per Clause 9.6 of Technical Specification, the remanufactured diesel engine must be capable of running in normal service for a distance not less than 750,000 KMs between periodical overhauls and not less than 1,500,000 KMs between major overhauls.

In contradiction to the above, during performance audit, it was observed that locomotive No. 8214 fitted with remanufactured Diesel Engine (Serial No. 78-L1-1070) at the cost of US$ 415,165 was put into service after rehabilitation on 07.05.2015. The said locomotive was shut down on 15.12.2015 after earning 125,160 kilometres due to defects in its Retainer. Warranty claim was lodged which was not accepted by the supplier. The locomotive remained stabled from 15.12.2015 to 27.3.2016, resulting in loss of earning amounting to Rs 20.510 million (104*Rs 0.19721=20.510). The engine was dismantled and major overhauling was done, which was due after six years of service or 1,500,000 KMs. The same problem was also witnessed in Locomotive No. 8207 and 8217. These deficiencies are the manifestation of substandard quality of material/workmanship used in rehabilitation of locomotive was not up to the mark because this problem had never been experienced in the past in that class of locomotives.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that warranty of complete diesel unit had been lodged. Later-on the locomotive was repaired / attended and offered for revenue service. The reply was not satisfactory because the warranty claim was not accepted by the contractor and the locomotive was repaired by PR at its own cost. The root cause of the problem was not ascertained. No comments had been offered about similar problem in case of locomotives No. 8207 & 8217.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that possibility of defective material/workmanship be investigated. Status of warranty claim lodged with the supplier be provided. Root cause of loosening nut/bolts of main bearings of rehabilitated locos be found out. Responsibility for the loss also be fixed.

4.3.10 Non-achievement of envisioned benefits for up-gradation of Engine Block Shop – Rs 56.407 million (US$ 553,014)

As per Clause 37.1 of Technical Specification of, the bidder was required to submit list along with cost of additional machines and tools required for re-building of engine block after examining the existing facilities in Locomotive Shop, Mughalpura, Lahore.

During performance audit, it was observed that the bidder (M/s EMDL) neither assessed existing facilities of tools, plant & machinery of engine block shop nor prepared any list of necessary tools, plant & machinery needed for up-gradation, in consultation of the field staff of Pakistan Railways. Against lump sum provision of US$ 553,014 comprising 116 items, the price of only two items {(Annexure-7(i)}, was quoted. Both the instruments were found unsuitable because they were not capable of performing the required functions and were lying unutilized. Moreover**,** against provision of only one torque wrench), the supplier shipped 03 items {(Annexure-7(ii)} at the cost of US$ 108151. Furthermore, six milling heads {(Annexure-7(iii)} were not supplied.

In addition to above, it was also noticed that 02 portable blasting machines with accessories supplied at the cost of US$ 26,558 were lying unutilised. On the other hand, the project authorities had carried out sand blasting of 27 locomotives at a cost of Rs 2.928 million through a contractor stating that trained staff and sand blasting facility was not available with PR. Thus, the expenditure incurred on procurement of sand blasting machines remained unfruitful. On physical visit, Audit noticed that no new machinery/equipment was seen to have been on board with the implementation of the project. The work was being done as usual with the old machinery/equipment. Thus, after having been made a huge investment in this scheme Pakistan Railways could not attain envisioned benefits.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the line boring machine and optical laser telescope were functioning properly. Out of six milling, one had been received and remaining five milling had not yet been shipped. Blasting machines had been received and were functioning. The reply was not got verified by project management despite several contacts by Audit.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that rresponsibility for acceptance of unsuitable/irrelevant machinery/tools be fixed. Reasons for non-up gradation of block shops despite considerable investment be explained. The payment of defective machinery/tools paid to supplier be recovered under intimation to Audit.

4.3.11 Shipment of major assemblies without pre-shipment inspection

As per clause 13.4 of the contract agreement dated 19.07.2012 for rehabilitation of 27 HGMU-30 Locomotives, all major assemblies like remanufactured DE units, Air compressors, Turbo chargers, Traction motors, main alternators, Electrical control cabinets were to undergo pre-shipment/stage inspection by PR inspectors.

In disregard to above, during performance audit, it was observed that M/s EMDL had shipped 39 traction motors, 9 diesel engine units, 7 electrical cabinets and 4 alternators without pre-shipment inspection. This resulted in clear violation of contractual obligations. This resulted in non-achievement of objective of pre-shipment inspection, and the expenditure incurred thereon remained unfruitful.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that only few assemblies were not ready at the time of inspection, resultantly, the pre-inspection/test of such assemblies was made in Pakistan after shipment and before the fitment on rehabilitated DE Locomotives and were found satisfactory. The reply was not satisfactory because pre-shipment inspection was obligatory as per terms and conditions of the contract, which was not got carried out.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that action taken against the supplier for shipment of major assemblies without pre-shipment inspection be intimated. The amount involved be recovered from the supplier under intimation to Audit.

4.3.12 Blockage of capital due to un-necessary procurement of material – Rs 14.842 million (US$ 145,510)

As per Annexure {A-1 (K)(i)} of agreement, the bidder was required to provide 27 brand-new A-9 valve of control stand.

During performance audit, it was observed that in addition to above requirement, an excess quantity of 24 Brake Valves worth US$ 145,510 was shipped by the supplier which was lying surplus and resulted in blockage of capital. The detail is given below:

Table-4

Invoice No.	**Quantity**	**Unit price (US$)**	**Total price (US$)**
93070613	4	4,052.37	16,209.48
93082008	10	4,052.37	40,523.70
93120217	4	4,052.37	16,209.48
93303978	6	12,094.58	72,567.48
Total	**24**		**145,510.14**

The issue was pointed out to project management in January 2017. The management replied on 10.04.2017 that 24 Brake Valves had been got repaired. The reply was not satisfactory because there was no provision for repair of the said valves in the contract agreement.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for getting unnecessary repair of material in violation to the contract agreement be fixed besides taking action against the person(s) held responsible. Payment made for excess quantity of material be recovered from the contractor. Measure be adopted to avoid recurrence.

4.3.13 Excess/defective supply of material – Rs 15.661 million (US$ 153,537)

As per contract agreement 19.07.2012, the supplier was required to ship material according to specifications and exact requirements.

In disregard to above during performance audit of 27 HGMU-30 locomotives, it was observed that the following material/spares supplied by the contractor, were found defective or in excess of the actual requirement:

Table-5

S. No.	Description	Part No.	Quantity required to be supplied as per contract agreement	Quantity actually supplied	Excess/ irrelevant supplied	Value of material excess/ irrelevant supplied US$
1	Engine Protector UTEX	9332828	0	120	120 @ US$ 808.98 each	97,077.60
2	Air Cleaner ASM	8472931	27	36	9 @ US$ 6273.24 each	56,459.16
					TOTAL	**153,536.76**

The issue was taken up with the management in January 2017. The management replied on 10.04.2017 that the matter had been discussed with the firm's delegation during their visit to PR on 06 & 07th February 2017. The firm had shown willingness to provide the free of cost material against these amounts. Up till now the material amounting to US$ 109711 has been received free of charge. It was still not decided whether the firm would collect the excess material or not. However, the final outcome would be brought to the notice of Audit shortly. The reply was not satisfactory because the amount paid for the excessive quantity may be recovered under intimation to Audit besides receipt of free of cost supplies not provided for in the contract was irregular which appears to be an excessive use of authority.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for excess/defective supply of material be fixed. The amount involved may be recovered from the supplier under intimation to Audit.

4.3.14 Blockage of capital due to unnecessary supply of material – Rs 14.921 million (US$ 146,289)

As per contract agreement 19.07.2012, the supplier was required to ship material according to specifications and exact requirements.

During performance audit, it was observed that 96 numbers of Spacers (Part No. 8355893) valuing US$ 1523.84 each, were lying un-utilized in Ware House of Rehabilitation Shop Mughalpura. It appeared that the quantity was received in excess of the requirement which resulted in blockage of capital.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that initial batch of 15 locomotives was rolled out with few locally sourced spares due to late shipments of imported materials. As per contract agreement the M/s EMDL was bound to supply the 324 Spacers, whereas, up till now 276 had been received and 48 were still outstanding. The available all quantity had been fully consumed. The reply was not satisfactory because as per contract agreement all the spares were required to be shipped from abroad whereas, the project management facilitated the firm to supply local material without getting authorization from Secretary/Chairperson who was the competent authority. Moreover, during physical verification, it was noticed that the entire quantity of spares had been issued to WM/Diesel, KC on demand for utilization against revenue, but the value thereof had not been adjusted.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for wrong supply of material be fixed. The amount of remaining quantity of 48 numbers be recovered from the supplier under intimation to Audit. The value of spares supplied to WM/D, KC be got adjusted.

4.3.15 Premature failure of long life/principal assemblies – Rs 4.680 million (US$ 45,884)

As per contract agreement dated 19.07.2012, the supplier was required to ship material according to specifications and exact requirements.

During performance audit, it was observed that 03 Governor PGR parts No. 8483536 worth US$ 15294.74 each, were issued to already rehabilitated locomotives No. 8207 and 8205 as detailed below. The Governor was a long-life component; its premature failure indicated that the quality of material/workmanship used in the manufacturing of the Governor was not up to the mark.

Table-6

Date	Description	Quantity	Value (US$)
18.9.2014	Governor-PGR Part No. 8483536 issued to Loco No. 8207	01	15,294.74
18.8.2015	Governor-PGR Part No. 8483536 issued to Loco No. 8205	01	15,294.74
10.10.2015	Governor-PGR Part No. 8483536 issued to Loco No. 8205	01	15,294.74

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that 03 Governors PGR were drawn from store for fitment on locomotives but their behavior on locomotives was not compatible with diesel engine. The locomotives were turned out with other compatible governors. The mater was taken up with the firm and the governors were then readjusted by foreign experts. Their behavior was also checked on test stand and found normal. Now the same would would be fitted on locomotives under rehabilitation. The reply was not satisfactory because no evidence regarding readjustment of governors was provided to Audit.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that circumstances under which reserved parts were issued to locomotives be explained. Root cause of premature failure of long life assemblies be investigated.

4.3.16 Non-provision of service engineer for watching performance of rehabilitated locomotives

As per Clause 35.1 of Technical Specifications, the bidder was required to provide necessary supervision for the entire period of rehabilitation of locomotives at Pakistan Railway workshops so as to ensure that agreed outturn, quality and schedule of time were met properly. Moreover, Clause 35.2 also states that the bidder shall provide the services of a service engineer after commissioning of locomotives for the warranty period for watching the performance of rehabilitated locomotives.

In contradiction to the above, during performance audit it was observed that no qualified service engineer was provided for supervision of rehabilitation process being undertaken in Railway Workshop Mughalpura. Resultantly, the out-turn of remaining 12 locomotives was badly delayed. Furthermore, no service engineer was provided after commissioning of locomotives for the warranty period for watching over the performance of rehabilitated locomotives due to which the performance of these locomotives was not being properly monitored.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that foreign service engineers of M/s EMD UK were regularly visiting the Rehabilitation Shop Mughalpura as per schedule and watching the performance of the rehabilitation process even more than specified men months in contract agreement. They had also engaged 12 local mechanical/electrical engineers who were trained by M/s EMDL in USA, Mexico & Germany. The reply was not satisfactory because no foreign expert was deployed to supervise the rehabilitation work. No service engineer was provided after commissioning of locomotives for the warranty period for monitoring the performance of rehabilitated locomotives due to which the performance of the locomotives was not being properly monitored.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that action be taken against the supplier for non-provision of service engineer. The amount involved be recovered from the supplier under intimation to Audit. Measures be adopted to avoid recurrence.

4.3.17 Violation of agreement regarding road tests of locomotives

As per clause 37.1 of the contract agreement, a selected number of locomotives after complete rehabilitation shall be subjected to road test to check hauling power, maximum speed, continuous tractive effort, acceleration, balanced speed, fuel consumption, heat balance riding quality etc. under actual operating conditions mentioned in the specification. The time of carrying out the tests shall be fixed by the purchaser, and will normally be after a period of three months of service of the rehabilitated locomotives. Any defect in design of material or workmanship or any failure of the equipment which may come up during these tests shall have to be corrected or remedied or replaced in all units by the manufacturer to the satisfaction of Pakistan Railways.

In disregard to above, during performance audit it was observed that test and trial of rehabilitated locomotives were not carried out as per contract obligations.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that after rehabilitation, running test of each locomotive was carried out. After successful completion of load test result the locomotive was turned out for light and load trial up to Khanewal. The light and load trial was accompanied by M/s EMDL service engineers and PR staff. During trial the all parameters were observed. Later on locomotive placed in the shop and final touches were applied and offered for revenue service. Light and load trial of 20 DE locomotives had been conducted.

The reply was not satisfactory because after three months of service, a selected number of locomotives were to be tested besides initial test and trials mentioned in the reply. These tests were never carried out.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that easons for non-carrying out test and trial of rehabilitated locomotives be explained. Responsibility for violation of contract obligation be fixed. Strict disciplinary action be taken against person(s) found responsible.

4.3.18 Non-supply of parts required for turning out the locomotives

As per contract agreement signed by PR with M/s Electro-Motive Diesel Limited, United Kingdom for rehabilitation of 27 HGMU-30 locomotives, all spares were to be provided by the contractor.

During performance audit, it was observed that spare parts worth millions of rupees had been issued from PR stock for turning out 15 locomotives. The total contract amount had been disbursed to the contractor but requisite parts had not yet been supplied.

The issue was taken up with project management in September 2016. The management replied on 10.04.2017 that the 1st batch of 15 locomotives was rehabilitated but few essential imported spares were missed resultantly shop-made items and few old serviceable / new parts were fitted and rolled out the above said locomotives for revenue service. Now the firm had delivered the materials to PR. The serviceable parts had been replaced with new ones. The reply was not satisfactory because the detail of parts and source documents through which the material was delivered by the supplier to PR were not provided to Audit for verification.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that list of spares showing value of each item issued by PR from its own stock for turning out of 15 locomotives be provided to Audit. Detail of parts delivered by the supplier along with copies of relevant invoices may also be provided to Audit for verification.

4.3.19 Loss due to purchase of air-conditions on exorbitant rate – Rs 95.602 million (US$ 937,277)

According to Clause 04 of PPRA Rules, procuring agencies, while engaging in procurements, shall ensure that the procurements are conducted in fair and transparent manner, the object of procurement brings value for money to the agency.

During performance audit, it was observed Pakistan Railways procured 27 air conditioning units, costing US$ 35,362.97 each under agreement dated 19.07.2012 for rehabilitation of 27 HGMU-30 locomotives. The cost of air condition unit was very high as compared to local market because the air conditioning unit with same specification was available in local market @ US$ 649.00 per unit. Thus, Pakistan Railways incurred extra cost per unit US$ 34,713.97 and sustained loss of Rs 95.602 million (US$ 937,277) due to negligence of Railway management.

The issue was taken up with project management in September 2016 but no reply was received. DAC meeting was not convened by the PAO despite reminders.

Audit recommends that matter be investigated for fixing responsibility for purchase of air conditioning units at exorbitant rates. Action be taken against the person(s) held responsible. The amount involved be recovered from the person(s) held responsible.

4.4 Construction and Works

The construction and works should be done in an efficient and economic manner in accordance with the requirements of PC-I.

4.4.1 Improper framing of work order No. 57084002

Para 1006 of Pakistan Government Railway Code for the Mechanical Department states that the essential features of any good work order system are the Conformity with the accounts classification, so that the correct allocation of the expenditure incurred in a workshop in the required detail is ensured. Further, elasticity which would allow of the increased analysis that may be required in certain cases for ascertaining and controlling the expenditure on individual operations and jobs.

In disregard to above, it was observed that work order No. 57084002 dated 10.11.2011 prepared by the Chief Inspector Production and approved by the Works Manager Rehabilitation did not depict any detail of expenditure (i.e. wages/material) to be incurred as well as timeline for the completion of any task. An expenditure of Rs 6,303.810 million was booked to that work order up to June 2016. The expenditure was not booked as per classification given in the approved PC-I. Further, scrutiny of the accounts as well as detail of material issued to various sections revealed that no physical work of rehabilitation project had commenced till February/2013. But labour charges were charged to work order No. 57084002 without doing any job for the project.

The issue was taken up with project management in December 2016. The management replied on 10.04.2017 that the production work order No. 57084002 was prepared comprising the detail of work required to be done by different sections and the PRTs were issued for project activities/operations for booking of labour. Further, at the time of commencement of the project, stripping, cleaning, welding & grinding 07 locomotives were started. The work requisitions to other workshop units were placed for manufacturing of various shop made items. The rehabilitation of locomotives was started with locally sourced materials; as such the labour charges and the cost of shop manufactured items was debited to the project cost. The reply was not satisfactory because regular, skilled/semi-skilled work force was being booked through PRTs. In addition to above, TLAs were also engaged but their man hours were not being taken into account. Furthermore, no evidence was provided to Audit showing detail of work done prior to February 2013. Thus, labour/supervision charges booked to the project before February 2013 were not in order.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility of improper framing of work order be fixed. Responsibility for non-provision of record/information in connection with labour/oncost be fixed. Disciplinary action be initiated against the persons held responsible.

4.4.2 Non-fixation of time standard for different operations

Para 602 of Pakistan Government Railway Code for the Mechanical Department (Workshops) states that time standards should be fixed for individual operations on or with the aid of particular machines and materials, and the time taken by individual workmen should be carefully recorded before it is decided whether the required standard of efficiency has been attained.

During performance audit, it was observed that no time standard had been fixed for different operations in Rehabilitation shop, because of which the efficiency of about 150 workmen engaged on different operations could not be checked.

The issue was taken up with project management in September 2016. The management replied on 10.04.2017 that there were 05 major sections in Loco Rehabilitation Shop, Mughalpura. PRTs for different operations were issued to perform the different jobs. The reply was not satisfactory because the regular skilled/semi-skilled work force was being booked through PRTs. In addition to above, TLAs were also engaged but there manhours were not being taken into account.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for non-fixation of time standard for different operations be explained. Responsibility for violation of codal provision be fixed. Strict disciplinary action be taken against person(s) found responsible.

4.4.3 Non-preparation of outturn statement of workers

Para 611 of Pakistan Government Railway Code for the Mechanical Department (Workshops) states that the outturn of piece-workers should be carefully examined both in regard to quality and quantity. Such checks should preferably be entrusted to supervisory staff who are not under the influence of any of those participating in piece-work benefits.

During performance audit it was observed that neither any outturn statement of piece-workers was being prepared nor checked by the supervisory staff in Rehabilitation shop. In absence of which, the payment of piece-work/overtime was not in order.

The issue was taken up with project management in September 2016. The management replied on 10.04.2017 that in workshop division, a specific document known as job ticket was being prepared by the supervisor in which start time of job, time close, time allowed, time taken & time saved are mentioned to calculate the piece work profit. Moreover, the work done is also mentioned on this document and the piece work profit is paid to entitled persons as per their outturn/work-done. The reply was not satisfactory because neither outturn of employees was being prepared nor the piece work was being paid to workers as per their work done/outturn, rather it was being worked out and paid on fixed percentage with no regard to any work-done/outturn.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for non-preparation of outturn statement be explained. Responsibility for violation of codal provision be fixed. Strict disciplinary action be taken against person(s) found responsible.

4.4.4 Non-preparation of financial justification for renewal/ replacement of locomotives

Para 1209 of Pakistan Government Railway Code for the Mechanical Department (Workshops) stipulates that before submitting estimates for renewal or replacements, it should be critically examined whether it would not be possible to avoid or, at least, postpone such replacement by adopting methods of reconditioning at a cost that could be justified financially. In all cases, in which reconditioning is decided upon, the total cost of reconditioning an asset should be charged to ordinary repair and maintenance in the same way as the cost of other repair work.

In disregard to above, Audit observed during the performance audit that in case of rehabilitation of 27 HGMU-30 DE locomotives at a cost of 6,558.524 million, the financial justification for renewal or replacement of the locomotives was not ascertained. This resulted in unjustified expenditure which needs to be explained.

The issue was pointed out to project management in September 2016. The management replied on 10.04.2017 that if rehabilitation cost of a locomotive was less than 60% of the new locomotive, then rehabilitation of locomotive was viable. The cost of 3000 HP new American locomotive was Rs 432 million and rehabilitation cost of each locomotive was Rs 243 million, which worked out to be 56% of new locomotive. Hence the rehabilitation of HGMU-30 locomotives was viable / economical. The reply was irrelevant because the method of financial justification established for renewal of the locomotives vide Para 1209 of the Mechanical Code was not followed.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for non-following the established method of preparing financial justification for renewal of locomotives be explained. Responsibility for deviation from the Code's provisions be fixed and appropriate action be taken against the person(s) held responsible.

4.4.5 Premature inclusion of three locomotives in rehabilitation project

As per Para 706 of State Railway General Code, the economic life of new locomotive is 20 years. Taking average of 200,000 KM per year, each locomotive should have had earned at least 4,000,000 KM during the entire useful life.

In disregard to above, it was observed that the following three locomotives were included in the rehabilitation project prior to completion of their useful life (i.e. 20 years or 4,000,000 KM). This resulted in irregular rehabilitation of 3 locomotives out of 27.

Table-7

S. No.	Locomotive No.	Kilometers earned upto November 2007	Remarks.
1	8202	2,085,500	The locomotive was temporarily deleted w.e.f. 20.1.1998
2	8221	1,010,683	The locomotive earned only 1,010,683 Kms during 22 years of life.
3	8223	2,517,905	The locomotive was temporarily deleted w.e.f. 05.06.1996

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that those locomotives were temporarily deleted from books due to accidents and for want of imported spares and were finally included in rehabilitation program so they might be put back on line. The reply was not satisfactory because those locomotives did not satisfy the basic criteria for rehabilitation hence inclusion of those locomotives in the rehabilitation plan was premature.

DAC meeting was not convened by the PAO despite reminders.

Audit, recommends that reasons for inclusion of locomotives in the rehabilitation Project prior to completion of their useful life/service be explained. Responsibility be fixed and disciplinary action be taken against the official(s) held responsible. Remedial measures be adopted to avoid recurrence.

4.4.6 Unjustified nomination of six locomotives for rehabilitation

During performance audit, it was observed that seven locomotives as detailed in Annexure-7 were withdrawn from operation for rehabilitation. Based on their previous years of operation, the average productivity per locomotive was 21,665 KM per month which was considered excellent (benchmark being 16,667 KM per month). Under the project, 15 locomotives (out of 27) had been turned out after rehabilitation. Their average productivity per locomotive worked out to be 17,687 KM per month (detail in Annexure-8).

In view of the above, Audit considered that nomination of the six locomotives for rehabilitation, which were giving excellent performance, was unjustified. This resulted in unjustified expenditure besides loss of potential earnings for the period these were held in rehabilitation because none of the locomotives was turned out after rehabilitation.

The issue was taken up with project management in January 2017. It was replied on 10.04.2017 that kilometers earned by a locomotive were based on a very important factor whether a locomotive was used for passenger train or for freight service. The locomotive linked with passenger train could earn more kilometers as compared to freight service.

The reply was not satisfactory because the comparison done by Audit before and after rehabilitation was on overall basis as per average actual performance, therefore, the question of deployment of locomotives either on passenger or freight traffic did not arise.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that criteria adopted for nomination of locomotives for rehabilitation be provided. Basis/factors to be considered for declaration of locomotive beyond economical repair be intimated. Responsibility for incurring unnecessary expenditure be fixed. Disciplinary action be taken against those held responsible.

4.4.7 Loss due to unnecessary repair of locomotive – Rs 8.582 million

Para 1801 of State Railway General Code provides that every Public officer should exercise the same vigilance in respect of Public expenditure and Public funds as a person of ordinary prudence would exercise in respect of the expenditure and the custody of his own money.

During performance audit it was observed that an accidental loco No. 8229 was sent to Rehabilitation Shop Mughalpura, Lahore for a nominated repair in June 2010 by Works Manager/Diesel, K.C. The locomotive was repaired at a cost of Rs 8,581,700 in June 2011 and returned back to Karachi Shed. The said locomotive was not put into service and subsequently dispatched to Rehabilitation Shop Mughalpura for rehabilitation under Rehabilitation of 27 HGMU-30 locomotives, wherein the complete body was dismantled. Thus, the repair carried out at a cost of Rs 8.582 million proved useless due to negligence of the concerned authorities.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the said locomotive was received in Loco Rehabilitation Shop Mughalpura along with work requisition for nominated repair, which was repaired as per scope of work mentioned in work requisition and the cost incurred was debited to the party concerned. After repair, if the locomotive was not put into service, it was the responsibility of the base shed. The reply was not satisfactory because Project Director was responsible to furnish the reply in consultation with the concerned quarters.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for carrying out unnecessary repairs of the locomotive be explained. Responsibility for the loss be fixed and disciplinary action be taken against the persons held responsible. Remedial measures be adopted to avoid such recurrence in future.

4.4.8 Improper preparation of detailed estimate

Para 903 of Pakistan Government Railway Code for the Engineering Department states that detailed estimate should be prepared in sufficient detail to enable the competent authority to make sure that the abstract estimate sanctioned by the higher authority is not likely to be exceeded. The detailed estimate of an open line work will comprise (i) statements showing details of estimated cost and (ii) an outer sheet giving the abstract of cost of work, the report, the financial justification and the allocation.

In disregard to above, it was noticed that the detailed estimate of the project was not prepared in detail rather the whole abstract estimate was reproduced without giving the detail of any item of work/supply. This estimate then made the basis for agreement and execution of the project. Consequently, the contractor/supplier succeeded in getting the entire LC amount by supplying items not exactly needed for the project, while a number of items essentially required for turning out the locomotives remained unsupplied.

The issue was taken up with project management in December 2016. The management replied on 10.04.2017 that the detailed estimate in the light of the PC-I was prepared and duly verified by the Account Office and got sanctioned by the competent authority . The reply was not satisfactory because the estimate did not provide the detail of any item of work/supply, in the absence of which it could not be considered as a detailed estimate.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for preparation of estimate of the project without sufficient detail be explained. Responsibility for non-adherence to rules be fixed and necessary action be taken against the persons held responsible.

4.4.9 Non-provision of credit for released material worth millions of rupees

Para 1240 (4) of Pakistan Government Railway Code for the Mechanical Department states during verification of estimates it should be seen that in case of renewal, replacement and dismantlement works, credit for sale proceeds of released material has been provided for in the estimate.

In disregard to above, it was observed during performance audit that no provision for credit of released material was made in the project's estimate. A huge quantity of material was released from the rehabilitation project of 27 HGMU-30 Locomotives which was dispatched by the Project Director to Works Manager/Diesel Karachi Cantt for disposal. The credit of released material worth millions of rupees, to be chargeable to the project allocation was irregularly charged to revenue allocation through different Material Return Notes during 2015-16 and 2016-17. This resulted in inaccurate estimation of project's expenditure due to negligence of executive/accounts authorities.

The issue was taken up with project management in December 2016. The management replied on 10.04.2017 that. there was no provision for credit of released materials in approved PC-I of the project, as such, all released materials were sent to the Works Manager/Diesel, K.C for further disposal. Since the matter related to WM/D, K.C, therefore, the para may be referred to concerned quarters for appropriate reply. The reply was not satisfactory because the project was executed by the PD, therefore, it was the primary responsibility of that office to ensure credit of released material to the correct head of account.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for misclassification of receipts and non-provision of credit for released material in the PC-I be fixed. Action be taken against the person(s) held responsible. Internal controls be strengthened to avoid recurrence in future.

4.4.10 Deviation from financial justification of the project

As per PC-I of the project the locomotives were planned to be used on freight traffic to haul the bogie wagons fitted with air brakes and roller bearings. Accordingly, financial justification of the Project was based on freight traffic.

In contradiction to the above, it was observed that majority of the locomotives were being deployed on passenger traffic, instead of freight traffic. Therefore, deployment of locomotives on passenger traffic was clear deviation from the justification embodied in the sanctioned PC-I.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the matter did not pertain to the PD office. The reply was not satisfactory because Project Director was responsible to furnish the reply in consultation with the concerned quarters.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for deviating the justification of the project be fixed. Action be taken against the person(s) held responsible.

4.5 Asset management

The asset management in a project should be done in an effective and efficient manner in order to secure the sophisticated machinery from any kind of misuse. The Guidelines developed by Planning Commission demand that the Project Director should be given financial and administrative autonomy so that he may carve out strategies for efficient management of the Project. It is the responsibility of the PD to implement the rules and regulations with respect to asset management and to ensure that the assets are managed in efficient and economic manner.

During performance audit of the Project, it was observed that asset management in the Project was not done in an efficient manner. The significant observations are discussed in the following Paras:

4.5.1 Loss due to detention of locomotives for premature wheel machining – Rs 27.61 million

As per clause 14.1 of the contract agreement dated 19.07.2012, the tenderer shall guarantee the performance of rehabilitated locomotives and all individual components for a period not less than 24 months from the date of putting into service.

During performance audit, it was observed that locomotives rehabilitated under the project were detained for premature wheel machining (Annexure-9). This resulted in loss of revenue amounting to Rs 27.61 million (140*Rs 0.19721=27.609).

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the wheel machining of locomotive was a continuous process and carried out as and when required for safe operation on line otherwise it could cause derailment. The reply was not satisfactory because the wheel machining of certain locomotives was done within short intervals unlike normal/routine process.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that root cause of the problem be ascertained and responsibility for loss of revenue be fixed.

4.5.2 Running of locomotive over line without complete safety devices

As per clause 14.1 of the contract agreement dated 19.07.2012, the tenderer shall guarantee the performance of rehabilitated locomotives and all individual components for a period not less than 24 months from the date of putting into service.

During performance audit, it was observed that rehabilitated locomotive No. 8229 was running on line without having the safety devices “Loco Over Speed”, “Even Recorder” and “Speedometer” since long. Running of locomotive without such vital safety devices was dangerous.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that the said locomotive, duly fitted with all safety devices, was rolled out for revenue service on 31.01.2015 after carrying out necessary test and trial. The reply was not satisfactory because as per “Monthly position of safety devices fitted on KC based locomotives” for the months of September 2015 and June 2016 the “Ground Relay,” Loco Over Speed” and “Speedometer” of the said locomotive were stated to have been defective. This position was being submitted by WM/D, KC to the CME/Loco. It is not out of place to mention here that the said locomotive met with an accident on 03.11.2016. At the time of accident, the locomotive was running with defective/without safety devices.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that the matter for running of locomotives with defective safety devices be investigated at an appropriate level. Disciplinary action be taken against those held responsible. Running of locomotives with full safety devices be insured in future.

4.6 Monitoring and Evaluation

The Project Wing of Planning Commission has clearly laid down the guiding principles with regard to monitoring and evaluation of the projects. For ensuring completion of the project within approved cost and time, the Planning Commission advises to monitor project activities on monthly basis. The Guidelines also envisage proper internal and external monitoring for effective and efficient project management.

During the course of performance audit of the Project, it was noticed that the management did not adhere to the directions of Planning Commission. There was no effective mechanism to monitor timely completion of each phase of the Project. The management also did not get approval of extension in time line for execution by CDWP and unauthorized expenditure over and above the project allocation was booked. The significant observations are discussed in the following Paras:

4.6.1 Un-authorized extension in execution period of the project

As per Planning Commission's Notification No. 24(4)PIA-I/PC/2016 dated 28th June, 2016, the Secretary concerned may continue to extend the period of execution only once which will not be beyond the closing date of financial year (i.e.30th,June). However, in case of unavoidable circumstances approval for proposed extension would be considered by the CDWP.

In contradiction to the above, it has been observed that as per approved PC-I the completion date of the Rehabilitation of 27 HGMU-30 Locomotive Project was 30.6.2015. The Secretary/ Chairman Railways granted extension in time limit up to 30.6.2016. Thereafter, the extension was required to be approved by the CDWP, which was not done. This resulted in unauthorized extension of the project beyond 30.6.2016.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that request of extension in execution period up to December 2017 was being submitted to Planning Commission. The reply was not satisfactory because extension in time limit had not yet been got approved from the CDWP.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that approval in execution period beyond 30.06.2016 be obtained from the competent forum under intimation to Audit.

4.7 Sustainability

According to Guidelines, sustainability after completion is another important aspect which needs to be considered; how it would yield the required output/outcome. Therefore, due attention has to be given to the sustainability aspect of the project at the preparation stage. Sustainability aspect of the project should be discussed in the PC-I.

While conducting the performance audit of the Project, it was observed that sustainability aspect was not properly addressed at the time of planning of the Project because the proposal for "Rehabilitation of 27 HGMU-30 Locomotives", being uneconomical, had already been turned down by the AGM/GM in April 2007. Moreover, the Chief Operating Superintendent (COPS) Pakistan Railways also did not support that scheme due to certain reservations. Therefore, the implementation of rehabilitation of 27 HGMU-30 Locomotives project was not in the public interest. The significant audit finding is as follows:

4.7.1 Implementation of uneconomical/unviable project

Para 1801 of Pakistan Railway General Code provides that every Public officer should exercise the same vigilance in respect of Public expenditure and Public funds as a person of ordinary prudence would exercise in respect of the expenditure of his own money.

During performance audit, it was observed that PC-I for rehabilitation of 27 HGMU-30 DE locomotives at a cost of Rs 3,327 million was submitted in April 2007. The General Manager, Pakistan Railways on the recommendations of CME/Loco and AGM/ Mechanical decided that the rehabilitation of locomotives was not economical. Instead thereof, PC-I for special repair of the said locomotives was processed. Meanwhile, in August 2010 an offer was received from M/s IPS/EMDL, UK for rehabilitation of 27 HGMU-30 locomotives. On the basis of that offer, the Secretary/Chairman, Ministry of Railways decided that the existing PC-I for special repair be amended as rehabilitation. Accordingly, a PC-I for rehabilitation of 27 HGMU-30 locomotives was submitted in December 2010 at the cost of Rs 5,108 million and subsequently was enhanced to Rs 6,558.524 million through revised PC-I in September 2012. It is not out of place to mention here that while vetting the revised PC-I (September 2012), the Chief Operating Superintendent (COPS) Pakistan Railways did not recommend the project on the grounds that all the previous projects for rehabilitation of locomotives did not yield desired results and that the estimated cost of the project was enough to purchase 19 new locomotives. In view of the facts mentioned above, Audit considered that the proposal for rehabilitation of 27 HGMU-30 locomotives was not viable and it was implemented against Railways' interest.

The issue was taken up with project management in December 2016. The management replied on 10.04.2017 that the matter did not pertain to the PD Office, hence it may be referred to concerned quarter for appropriate reply. The reply was not satisfactory because Project Director was responsible to furnish the reply in consultation with the concerned quarters.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility for unjustified/ uneconomical implementation of scheme be fixed and aappropriate action be taken against person(s) held responsible. Remedial measures be adopted to avoid such recurrence in future.

4.7.2 Unreliable figures of productivity, earnings and annual expenditure of the project

As per para 1234(2) of Railway Code for Mechanical Department it is the duty of Accounts Officer in his capacity as financial adviser, to examine Zealously all proposals for expenditure, with a view to see that proper financial justification is forthcoming in the case of all works requiring such financial justification.

While scrutinizing record it was observed that estimated projected figures of productivity, earning and annual expenditure of the revised PC-I of the project varied to large extent with similar figures of another project i.e Procurement of 58 DE locomotives as detailed in Annexure 10. This was unusual as the base year for making calculation of cost/revenue was the same in both cases that is 2010-11. This rendered the projected figure unreliable. Moreover, net additional earning per loco/year of Rs 71.981 million calculated in the revised PC-I of rehabilitation of 27 HGMU-30 Locomotives project was incorrect because it was worked out without considering the 50% share of other infrastructure like track/coaches. Thus, by deducting 50% share of other infrastructure, the net additional earning per loco/year works out to be Rs 35.955 million instead of Rs 71.981

million. In view of the above Audit considered that the PC-I of the projects were being prepared in haphazard manner without due diligence, casting doubts about project's viability.

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that formation of feasibility study, preparation of PC-I or cost comparison of different locomotives fleets, etc. was not the purview of that office. Hence, the para may be referred to concerned quarters for appropriate reply. The reply was not satisfactory because the Project Director may refer the issue to the concerned quarters for obtaining comprehensive reply.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that responsibility be fixed for inconsistency between the justification of two PC-I forwarded by the same office during the same financial year which rendered the viability of both the projects as doubtful. Reasons for incorrect working of net additional earning without deduction of 50% share of other infrastructure like track/coaches etc. be explained.

4.7.3 Low performance of locomotives due to high rate of failures

As per clause 14.1 of the contract agreement dated 19.07.2012, the tenderer shall guarantee the performance of rehabilitated locomotives and all individual components for a period not less than 24 months from the date of putting into service.

During performance audit of rehabilitation of 27 HGMU-30 locomotives, it was noticed that since putting into service the average reliability of rehabilitated locomotive remained unsatisfactory against the benchmark of 100,000 KM per failure, the reliability of 08 locomotives (53% of 15 locomotives), remained in the range of 27,660 to 82,558 KM per failure till October 2016 (Annex-11). Moreover, cumulative availability of locomotive number 8205 and 8214 was 84% and 46% respectively against the benchmark of 90%. This was because of frequent failures, premature wheel machining and nominated repairs etc.

The issue was taken up with the project management in January 2017. The management replied on 10.04.2017 that at present 20 locomotives had been rolled out after rehabilitation for revenue service. At the end of February 2017, the average availability of locomotives was 89.76% and cumulative reliability was 83,945 KM per failure. The reply was unsatisfactory because during verification, it was observed that at the end of June 2017, the average availability and reliability of locomotives were 83% and 89,635 KM/failure respectively which were below the benchmark.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that reasons for less Availability/reliability be ascertained. Root cause of the problem areas be investigated. Responsibility for the loss due less reliability be fixed.

4.7.4 Loss of potential earnings due to delay in turning out of locomotives – Rs 863.772 million

As per revised PC-I, the project envisaged rehabilitation of 27 HGMU-30 locomotives at the cost of 6,558.524 million within 48 months (i.e. up to 30.6.2015) with effect from July 2011. The prime object of the project was to rehabilitate the locomotives to generate additional 1,150 MTKM of freight traffic per annum, besides increasing transport capacity & improving quality of service to bring about Goodwill of public through punctual running of trains.

During performance audit of the Project it was noticed that out of 27 locomotives only 15 locomotives were put into service till 30th June, 2016 (physical progress 56.56%). Whereas, against the total allocation (i.e. Rs 6,558.524 million), an expenditure of Rs 6,303.810 million was booked to the Project (financial progress being 96.12%). Thus, the physical progress of the Project was far behind the financial progress which indicated that the expected “value for money” was not achieved. Due to delay in turning out of remaining 12 locomotives, prime objective of generating additional 1,150 MTKM traffic per annum was not achieved and Pakistan Railways suffered a loss of potential earning Rs 863.772 million (12*71.981=863.772).

The issue was taken up with project management in January 2017. The management replied on 10.04.2017 that at present 20 locomotives had been rolled out for revenue service. The main cause of the delay was non-shipment of imported material. The matter was vigorously taken up with the firm. Now majority of the imported material had been received. The diesel engines were being assembled one by one and hopefully the project would be completed up to December 2017. After completion of the project the firm would be imposed LD charges laid down in the contract agreement. The reply was not satisfactory because the entire LC amount had been disbursed but the required outturn was not achieved. The LD charges need to be imposed immediately instead of waiting for the completion of the Project to avoid legal implication.

DAC meeting was not convened by the PAO despite reminders.

Audit recommends that penalty for delay in turning out of locomotives be imposed without further loss of time. Responsibility for loss of potential earning worth Rs 863.772 million be fixed. Loss involved be recovered from the persons held responsible.

4.8 Overall Assessment

The overall performance of the project was not satisfactory because out of 27 Locomotives only 15 Locomotives were put into service till 30th June, 2016 (physical progress 56.56%). Whereas, against the total allocation (i.e. Rs 6,558.524 million), an expenditure of Rs 6,303.810 million was booked to the Project (financial progress being 96.12%). Thus, the physical progress of the Project was far behind the financial progress which indicates that the expected value for money spent on the Project was not achieved. Moreover, the performance of 10 Locomotives, out of 15 rehabilitated under the Project, was found unsatisfactory. The prime objective of generating additional 1,150 MTKM traffic per annum was not achieved because due to delay in turning out of remaining 12 Locomotives, Pakistan Railways had suffered a loss of potential earning Rs 863.772 million per annum. Moreover, the average availability/reliability of rehabilitated locomotives was not up to the mark due to high rate of failure thereby trains were detained causing inconvenience to the passengers/consigners.

5. CONCLUSION

The Project Rehabilitation of 27 HGMU-30 DE Locomotives was started without proper planning; it was not properly managed. The relevant laws, Planning Commission's Guidelines for Project Management and international best practices were completely neglected. Since putting into service, the average reliability of the rehabilitated locomotives was not up to the mark. Moreover, premature failure of principal assemblies/long life components followed by massive warranty claims within a short span of time were the indicative factors that suggest to believe that majority of locomotives may not be able to complete extended life up to 15 years. Instead of spending huge capital on rehabilitation of over aged locomotives, new locomotives having efficient fuel system may be manufactured locally in Pakistan Locomotive Factory, Risalpur, which has capacity to manufacture 25 locomotives per year.

5.1 Key issues for the future

The Project should start after proper feasibility study/PC-II, so that preparation of PC-I is based on correct data, keeping in view the ground realities so that the project may be completed within stipulated time and estimated cost. There should be a single, dedicated Project Director. For assessment of design as well as quality of material/workmanship used in the manufacturing of locomotives, third party validation needs to be considered.

5.2 Lessons Identified

The Project was started without proper planning and ascertaining the ground realities which resulted in premature failure of parts. There was no single dedicated Project Director as required by the Guidelines of Planning Commission and the Project Directors were frequently changed during the execution of the Project. Since project was neither carefully examined nor analysed, right from inception, rehabilitation of old locomotives ended up in incurrence of wasteful expenditure without achieving intended objectives in an economical manner. Lack of proper supervision and due care by project management led to financial mismanagement and incorrect payments. Due to old aged locomotives, the availability of spares also remained the problem area, which resulted in considerable time overrun.

ACKNOWLEDGEMENT

Audit acknowledges the support of the Project Director/Rehabilitation, Director Procurement, CME/Loco and DCOS (Shipping) for their cooperation and assistance in providing the necessary information and record.

Annexure-1

Statement showing the detail of employees found absent from duty during physical verification. (Para 4.1.3)

S. No.	Name	Actual posting	Working place	Monthly rate of pay	Remarks
1	Mehmood Azam S/o Ghulam Mustafa ticket No. 133	Rehab. Shop. TLA	Frequently absent	11,866.45	Found absent from duty on physical verification several times
2	Mehboob Alam S/o Ghulam Mustafa ticket No. 134	Loco-70 TLA	PD Office	11,866.45	Ticket was being picked daily from time office in both shifts by someone else

Annexure-2

Statement showing the detail of skilled employees not deployed on their respective jobs. (Para 4.1.3)

S. No.	Name & Designation	Ticket No.	Monthly rate of pay (Rs)	Remarks
1	Muhammad Afzal, Mistry Driver Period:- 7/2013 to 8/2016	2095	Rs 54,127 (including overtime of Rs 10748 for the month of 8/2016)	Found absent from duty on physical verification several times
2	Abdul Qadir Khan, Skilled Motor Driver Period:- 7/2013 to 8/2016	5295	Rs 40,227 (including overtime of Rs 8077 for the month of 8/2016)	Found absent from duty on physical verification several times
3	Muhammad Sajid, Muawan Period:- 7/2013 to 8/2016	5295	Rs 19,019 (including overtime of Rs 2465 for the month of 8/2016)	Found absent from duty on physical verification several times
4	Rana Asghar Hussain, Mistry. Period:- 7/2013 to 8/2016	9785	Rs 57118 (including overtime and Piecework of Rs 8735 & Rs 4003 respectively. for the month of 8/2016)	Work not assigned
5.	Farooq Ahmed, Skilled Fitter. Period:- 7/2013 to 8/2016	9975	Rs 54,519 (including overtime and Piecework of Rs 6595 & Rs 4191 respectively. for the month of 8/2016)	Work not assigned

Total Gross salary of above 5 officials for the month of 8/2016= Rs 225,010 (Per annum=Rs 2.770 million)

Annexure-3

Statement showing the detail of staff found mis-utilised by the project management (para 4.1.3)

(Rs. in million)

S. No.	Detail of staff mis-utilised	Amount
1	Two employees appointed on TLA did not perform duty where they were employed. They were found absent from duty on physical verification during the course of audit. Thus per annum expenditure incurred on their pay and allowances was irregular.	0.285
2	Five employees of skilled category were being regularly spared from shops on Loco-70. Their attendance was not being marked daily, however, at the end of each month the attendance sheets were prepared and sent to bill section for payment of salary. No formal job descriptions of the officials were prepared. Most of them were found absent from duty on physical verification several times during the course of audit. Thus, per annum expenditure incurred on their pay and allowances was irregular.	2.770
3	A Junior Mechanical Engineer (BPS-17), having no past experience of stores handling, was appointed against post of Assistant Controller of Stores (ACOS). This resulted in irregular appointment because he was not eligible for that post. Thus, per annum expenditure incurred on their pay and allowances was irregular.	1.133
4	There was provision of one post of Accounts Officer (B-18) and Accountant/Senior Auditor (B-16) in revised PC-I of the Project. No appointments were made against the posts rather the pay and allowances of Accounts Office staff were being charged against those posts. Thus, per annum expenditure incurred	1.834

	on their pay and allowances was irregular. It was not out of place to mention here that the aforementioned Accounts Officer and Assistant Accounts Officer were also working as "Internal Check Officers" on behalf of the FA&CAO, not only for the Rehabilitation Project but also for the other 3 projects as well. In this situation, "organizational independence" of the Accounts Officer being responsible for pre-audit of all the payments was impaired and risk of unfair financial transactions/misstatements was enlarged.	
	Total:	**6.022**

Annexure-4

Statement showing detail of non-utilisation of funds and excess expenditure against cash releases (Para 4.2.1)

(Rupees in million)

Year	Budget allocation	Releases	Actual expenditure	Saving/Excess	%age
2011-12	1,400.000	253.000	18.324	(234.675)	92.75%
2012-13	1,000.000	735.000	693.301	(41.699)	5.76%
2014-15	2,300.000	2,961.652	2,299.806	14.648	
2015-16	505.000	405.000	416.455	11.455	
Total				**Saving =276.374** **Excess=026.103** **Total=302.477 m**	

Annexure-5

Detail of clauses of the specification due to which the offer of M/s EMD was disqualified by the tender committee. (Para 4.3.1)

S. No.	Clause No.	Parameters	Status
1	6.1	Amount of passenger train trailing load of the rehabilitated locomotive can haul at a speed of 120 KMPH and time taken from start to achieve required speed on level track (zero gradient) not provided	Disqualification of bid
2	6.2	Amount of freight train trailing of load the offered locomotive can haul at a speed of 80 KMPH and time taken from start to achieve required speed on level track (zero gradient) not provided	Disqualification of bid
3	6.3	Tractive effort v/s speed and train resistance v/s speed curves along with calculation to bring out balanced speed with specified loads as indicated in appendix-A for both passenger and freight train operation not supplied by the bidder. The tractive effort curves will be drawn at full and 80% load factors for both passenger and freight services	Disqualification of bid
4	22.1	Confirmation regarding trouble free working of air brake system with microprocessor controlled system not provided	Disqualification of bid
5	22.4	The bidder does not certify that the braking system is capable to stop freight train of 2600 tonnes trailing load equipped with air brake at a speed of 80 KM/H within the safe braking distance (1200 m) on main line track with a falling gradient of 1 in 200. The bidder does not certify that the braking system	Disqualification of bid

		is capable to stop the maximum trailing load of 850 tons of passenger train at a speed of 120 KM/H within safe braking distance (1200 m) and no braking distance calculation	
6	27.1	Non-provision of instruments in driver cabin as per detail in clause 27.1	Disqualification of bid
7	28	Any one or more of stipulated, safety devices not provided.	Disqualification of bid
8	48.1	Any one or more of the prescribed conditions of the Maintenance Contract have not been complied with by the bidder	Disqualification of bid

Annexure-6

Statement showing evidence of pooling by bidders in tendering process. **(Para 4.3.5)**

S. No.	Tender No. & Date	No. of firms participated	Value of tender (Rs)	Similarities
1	197-S/27/31-Reh-21 dated 20.2.2015 (Procurement of industrial gases)	04	210,000	1. M/s M.P Interprises Kot Shahab-ud-Din G.T Road Shahdara.(1st lowest) CDR No. 1198856 dated 14.2.15(MCB Timber Market Lahore). 2. M/s Chitral Oil & Ghee Industries, PVT Ltd Multan Road Lahore (2nd lowest). CDR No. 1198855 dated 14.2.15(MCB Timber Market Lahore).
2	197-S/27/31-Reh-34 Dated 25.2.2016 (Repair/up gradation of Plano Milling Machine	03	2,800,000	1. M/s Electrum, New Garden Town Lahore (1st lowest). CDR No. 13515772 dated 17.2.16(HBL Model Town Branch Lahore). 2. M/s Contech Machinery Market Sharif Garden G.T Road Lahore (3rd lowest ignored). CDR No. 13515771 dated 17.2.16(HBL Model Town Branch Lahore).

3	197-S/27/31-Reh-35 Dated 4.6.2016 (Procurement of bracket for DF2A, Oil Bath Filters for Locomotive Rehabilitation Project)	02	494,240	1. M/s Hussain Corporation Al Faisal Town Ghazi Road Lahore Catt. (1st lowest). CDR No. 0000629 dated 31.5.16(HBL Zarar Shaheed Road Lahore). 2. M/s Shah Rubber Works, New Colony Begam Pura Lahore (2nd lowest). CDR No. 0000630 dated 31.5.16(HBL Zarar Shaheed Road Lahore).

Annexure-7

Non-achievement of envisioned benefits for upgradation of engine block shop at the cost of Rs 56.407 million (Para 4.3.10)

Annexure-7(i)

Instruments lying un-utilised being un-suitable

S. No	Description	Value US$
1	Line Boring Machine	38,570
2	Optic/ Laser Telescope	25,380

Annexure-7(ii)

Three items were provided against provision of only one

Invoice No.	Description	Part No.	Value US$
92892643	Wrench Main Bearing Qty.01	9523800	17,401.27
92914927A	Set-air Torque Multr Qty.01	8474808	84,254.86
92914927A	Power Wrench Set Qty.01	8474807	6,494.65
		Total:	**108,150.78**

Annexure-7(iii)

Tools not yet provided

S No.	Description	Quantity to be supplied
1	Milling Head(315 mm dia)including accessories	2 Nos.
2	Milling Head (100-125 mm dia) including accessories	2 Nos.
3	Milling Head (63 mm dia) including accessories	2 Nos.

Annexure-8

Statement showing detail of average kilometers worked per month by locomotive before rehabilitation. (Para 4.4.6)

S. No.	Locomotive No.	Average kilometers worked per month
1.	8211	24,613
2.	8218	24,236
3.	8219	23,120
4.	8220	22,442
5.	8224	20,712
6.	8226	19,344
	Total	**151658**
	Average	**21665**

Statement showing detail of average kilometers worked per month by locomotive after rehabilitation. (Para 4.4.6)

S. No.	Locomotive No.	Average kilometers worked per month
1.	8221	20768
2.	8208	19576
3.	8225	19272
4.	8203	18756
5.	8206	18688
6.	8228	18631
7.	8215	17664
8.	8209	17630
9.	8210	17491
10.	8207	17149
11.	8229	16952
12.	8216	16664
13.	8217	16568
14.	8214	14933
15.	8205	14565
	Total	**265307**
	Average	**17687**

Annexure-9

Statement showing detail of loss of revenue Rs 27.61 million due to premature wheel machining of rehabilitated HGMU-30 locomotives. (Para 4.5.1)

S. No.	Loco No.	Period	Total No. of days
1.	8203	2.10.15 to 4.10.15 4.12.15 to 6.12.15 30.1.16 to 2.2.16	10
2.	8205	14.7.15 to 16.7.15 5.1.16 to 7.1.16 22.7.16 to 31.7.16	16
3.	8208	29.2.16 to 31.2.16 4.4.16 to 6.4.16	6
4.	8214	20.8.15 to 21.8.15 13.10.15 to 16.10.15 7.12.15 to 9.12.15 3.10.16 to 6.10.16	13
5.	8215	27.8.15 to 28.8.15 12.10.15 to 13.10.15 8.9.16 to 10.9.16	7
6.	8217	12.7.15 to 14.7.15 23.10.15 to 24.10.15 29.6.16 to 3.7.16	10
7.	8225	6.8.15 to 7.8.15 3.10.15 to 7.10.15 20.11.15 to 24.11.15 1.2.16 to 6.2.16	18
8.	8209	8.6.15 14.9.15 to 16.9.15 27.10.15 to 28.10.15	6
9.	8207	2.8.15 22.5.15 to 23.5.15 1.8.16 to 7.8.16 10.9.16 to 16.9.16	17
10.	8229	28.9.15 to 1.10.15 21.11.15 to 22.11.15	6
11.	8210	15.9.15 to 16.9.15 6.11.15 to 9.11.15 21.1.16 to 22.1.16	8
12.	8228	8.1.16 to 8.1.16	4
13.	8221	3.6.16 to 6.6.16 4.8.16 to 8.8.16	9
14.	8216	24.10.15 to 25.10.15 1.12.15 to 5.12.15 3.2.16 to 5.2.16	10
Total:			**140**

Annexure-10

Statement showing detail of variations in facts and figures of two PC-Is prepared at a time for same class of locomotives
(Para 4.7.2)

Description	PC-I 27 DELs (September/2012)	PC-I 58 DELs (December/2012)	Variation
Average productivity (per loco/year)	100 MTKM	130 MTKM	30%
Freight earnings	Rs 143.962 million	Rs 211.848 million	47%
Net earnings (50% of freight earning attributed to locomotive on the basis of investment ratio on other elements or infrastructure (i.e track, coaches etc.)	Rs 71.981 million	Rs 105.24 million	47%
Average annual repair, maintenance and operational cost	Rs 32.057 million	Rs 36.703 million	14%

Annexure-11

Statement showing detail of low performance locomotives (Para4.7.3)

S. No.	Loco No.	Date of putting in service	KM worked	No. of failures	Reliability(KM per failure)
1.	8205	18.11.2014	346634	7	49519
2.	8209	02.04.2015	347685	5	69537
3.	8210	14.02.2015	353000	6	58833
4.	8214	12.05.2015	221350	8	27669
5.	8217	30.12.2014	350778	8	43847
6.	8225	24.03.2015	374376	6	62396
7.	8228	13.10.2015	247674	3	82558
8.	8229	21.02.2015	353598	6	58933